

REMARKS

Reconsideration of the captioned application is respectfully requested in light of the amended claims and following remarks. Claims 1-34 are pending, claims 4, 16, 29, 30, and 32-34 are withdrawn, claim 12 is objected to, and claims 1-3, 5-15, 17-28, and 31 are rejected. The specification and claim 12 have been amended to overcome the outstanding objections. Claims 1, 13, and 26 have been amended to overcome the rejections for indefiniteness. Claim 27 has been amended to make the language of this claim consistent with amended claims 1, 13, and 26. Claims 3, 4, 12, 15, 16, 24, 25, 28, 29, 31, and 32 have been amended in order to make the second letter “k” of the amended expressions into subscript format, in order to be consistent with the specification. Claims 8, 9, 10, 20, 21, and 22 have been amended to add a period to the end of the claims.

Drawings

Formal drawings were filed with the present application on July 1, 2004. Acceptance of these drawings is respectfully requested in the next communication from the Examiner.

Priority Document

A certified copy of the priority document Japanese Patent Application No. 2003-124585 was filed on July 1, 2004. Acknowledgement of receipt of the certified copy of the priority document is respectfully requested in the next communication from the Examiner.

Rejections Under 35 USC § 102(b)

Applicants traverse the rejection for anticipation of claims 1, 2, 6, 13, 14, 26 and 27 by Yang et al., Nucleic Acids Res., 2002, 15;30(4):e15 (“Yang”) under 35 USC §102(b) on the grounds that the Examiner has failed to meet his *prima facie* burden to reasonably explain how Yang anticipates the present invention.

MPEP § 2132 makes it clear that in making a rejection for anticipation, it is incumbent upon the Examiner to demonstrate how each and every element recited in the claims is

expressly or inherently described in a single prior art reference. Moreover, the reference must show that the elements are arranged as recited in the claim. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). “The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required.” *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicants respectfully submit that the office action provides insufficient explanation as to how it is believed that Yang recites every feature of the claims. The rejection for anticipation begins on page 3 of the outstanding office action, under the section entitled “Claim Rejections – 35 USC § 120(b)”. Under this caption, on page 3, the office action states that claims 1, 2, 6, 13, 14, 26 and 27 are rejected as being anticipated by Yang. From pages 4 to the top of page 6 of the office action, it appears that the text of claims 1, 2, 6, 13, 14, 26 and 27 has been replicated therein. The remaining paragraphs of page 6 of the office discuss the title of the Yang article, reproduce the three sentence paragraph found under the caption “Image processing”, and state Yang describes a statistical method called “Scale Normalization”. No analysis of the claims with respect to the rejection for anticipated is offered pages 4-6. The text on page 7 of the office action provides a one sentence quote from Yang about scale normalization. Another sentence is quoted from Yang about S-D transformation. The last paragraph on page 9, quotes three sentences from Yang, about strengthens and weakness of normalization techniques and where further information can be downloaded from the internet. The Examiner does not provide copies of this information.

Only on page 7 of the Office Action are there two sentences that relate the Yang reference to the captioned application. The first sentence is “Yang et al. continue to describe an MA plot based on sensitivities between the dyes, which is equivalent to the definition of the applicant from an S-D transformation . . .” The second sentence is “Figures 1-4 on pages 4-6 illustrate the outputs of several stages of normalization as claimed in the instant set of

claims.” This second sentence is the only statement in the office action the explicitly states why the Examiner thinks that Yang anticipates the pending claims.

In view of the scope of analysis presented, applicants contend that the office action fails to meet the Office’s burden of establishing how Figures 1-4 of Yang, all denoted as within-slide normalizations, anticipate the recitations of claims 1, 2, 6, 13, 14, 26 and 27. Figures 1-4 show data plots, not devices, methods of use, programs, or a computer-readable memory with a program. Independent claim 1 is drawn to a cDNA microarray correction system and has recitations to an input device, a data standardization means first correction means, second correction means and an output device. Independent claim 6 is drawn to a method of cDNA microarray data correction method, comprising inputting previously-adjusted gene expression intensity data, standardizing the gene expression intensity data, outputting the standardized gene expression intensity data, estimating a distortion depending on the spot position on grid coordinates, outputting the first corrected gene expression intensity data whose distortion depending on the spot position has been corrected, performing an S-D transformation, and outputting the second corrected gene expression intensity data. Likewise, claims 26 and 27, respectively drawn to a cDNA microarray data correction program and a computer-readable memory medium containing a cDNA microarray data correction program, cannot be anticipated by Figures 1-4.

Therefore the present rejection for anticipation should not be maintained because the Examiner has not met his *prima facie* burden to demonstrate how each and every recitation of the present claims is described by Yang.

Moreover, applicants contend that none of the present claims, either expressly or implicitly, are anticipated by the Yang reference because the “Scale Normalization” of Yang does not correspond to the S-D transformation and plot of the present invention. Yang discloses a correction method for correcting a distortion depending on a spot position as within-print tip group normalization. That is, Yang et al discloses a MA plot-based correction. On the other hand, in the present invention, the correction means estimates and corrects a distortion depending on a spot position on grid. Thus the present invention is not

anticipated by Yang et al. The deficiencies of Yang and the advantages of the present S-D transformation over the MA plot-based correction of Yang are described in the specification at page 3, line 23 to page 5, line 1 and page 6, lines 4-15.

Furthermore, with respect to claim 3, the method of standardizing the data, and claims 7 and 8, a correction method for correcting a distortion depending on a spot position, none of these recitations are disclosed or suggested by Yang.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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